Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Advanced Television Systems	)	
and Their Impact Upon the	)	MM Docket No. 87-268
Existing Television Broadcast	)	
Service	)	

TO: The Commission

BROADCASTERS' REPLY TO COMMENTS ON
THE FOURTH NOTICE OF PROPOSED RULEMAKING

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SUMMARY

Most of the comments filed in response to the Fourth Notice of Proposed Rulemaking support our position that the opportunity for this country's universally available, free broadcast service to survive in, and adapt to, the new digital environment depends on the Commission's assignment of transitional 6 MHz channels to broadcasters. The seamless transition from the existing NTSC service to a flexible and robust ATV service should be within a framework that ensures all ATV broadcast services are made available to the public as quickly as possible.

In making the transition to the digital era, broadcasters will incur enormous costs, disruption, and risks. The industry faces the sternest challenge of its history. But the greatest hazards to the transition and even to this country's existing free television service are regulatory policies that would make it impossible for broadcasters to compete with other media, and would deprive the public of the potential for a free television service of the highest quality.

The three most important ingredients to the public's successful transition to ATV are: (1) the assignment of channels that can accommodate full HDTV to those already providing the public with free television service, (2) mandatory cable carriage of all local broadcast programming, and (3) maximum commonality between cable and terrestrial broadcast technologies to ensure the swift penetration of cable-ready ATV sets.

First, any plan of action that does not involve the assignment of full 6 MHz ATV channels to existing broadcast stations will thwart primary goals of the ATV project by denying the public the opportunity ever to evaluate and choose broadcast HDTV and forever limiting the availability of HDTV to paying subscribers of non-

broadcast services. It will also delay the transition by forcing the development of a new ATV transmission standard.

Second, even assuming broadcasters are assigned 6 MHz transitional channels, cable carriage of the full complement of free programming that local stations intend their audiences to see will determine whether or not ATV has a fair chance in the marketplace. The Commission's application of the existing must carry requirements to broadcast material presented on ATV channels is essential to its policy of assuring that the public has access to ATV broadcast programming, and relatedly, to the acceleration of the reclamation of NTSC spectrum. ATV is unlikely to succeed unless the large majority of the public that receives broadcast signals via cable is assured access to the full range of ATV programming and has reason to purchase ATV sets. Only then will there be an audience large enough to drive down the prices of ATV sets and spur the production of ATV programming. The purpose of the must carry requirements supports mandatory carriage of both the ATV and NTSC channels, and cable systems' increasing capacity makes such carriage feasible without undue burden.

Third, the goal Congress has established of preserving a competitive over-the-air broadcast system and universal public access to local broadcast programming will not be accomplished unless the cable industry adopts digital technologies that do not hinder the reception of ATV signals by cable subscribers. Similarly, securing this pass-through will have little value unless ATV sets can deliver the full array of digital broadcast signals. If the cable industry adopts technologies that have little or nothing in common with the broadcast ATV standard -- a standard that was developed with the cable industry's participation and needs in mind, then consumers will have to pay more for ATV sets or purchase a range of incompatible electronics equipment. This outcome

is not in anyone's interest -- least of all consumers' -- and can be prevented by requiring a maximum commonality between the broadcast and cable technologies. Such a requirement will also serve to prevent a further entrenchment of cable's gatekeeping function by minimizing the need for set-top boxes and maximizing the likelihood that there will be affordable cable-ready ATV sets.

These few and fundamental components are necessary to establish the appropriate framework for the transition to digital broadcasting.

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This reply to comments on the Commission's Fourth Further Notice of Proposed Rule Making and Third Notice of Inquiry (released in the above-captioned docket on August 9, 1995) ("Fourth NPRM") is submitted on behalf of parties representing a wide cross-section of the country's terrestrial broadcast television stations and networks ("Broadcasters") -- the same group of 97 broadcast organizations that filed comments in this proceeding on November 20, 1995 ("Joint Comments").[1/]

It is widely agreed that the transition to digital broadcasting will yield great benefits to the public's free, universal television service upgraded to the highest technical level including the ability to view programming with the quality of 35 mm film video and compact disc audio. In leading the public's free, local and universal service into the digital era, broadcasters will incur enormous costs, disruption, and risks. The industry faces the sternest challenge of its history. Not only is it uncertain that the industry as a whole will make the transition successfully; it is virtually inevitable that

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[1/] All Broadcasters support the general thrust of these reply comments, although there may be differing views with respect to the particulars.

individual stations will fail. Accordingly, various proposals that would have the effect of intensifying the difficulty of broadcasters' challenge -- diminishing must carry and retransmission consent obligations, allowing incompatible cable technologies to proliferate, splitting up the 6 MHz ATV channels, disenfranchising NTSC viewers by rigid and unrealistic transition schedules based on guesses about the roll out of ATV -- are demonstrably and profoundly contrary to the public interest.

I. CONVERGENCE OF BROADCASTERS AND OTHER COMMENTERS

Our Joint Comments listed the ten most important steps the Commission should take in this proceeding. These included: offering 6 MHz channels to those who provide the public's current broadcasting service, establishing a reasonable ATV station construction schedule, regulating ATV and NTSC station operations through a single license, ensuring that the public has an opportunity to view and judge HDTV, requiring that broadcasters make the transition to ATV as soon as practical without disenfranchising viewers, applying must carry rules to the ATV channel, and otherwise ensuring that cable subscribers can receive ATV broadcasts without undue expense or confusion. Of those ten, significant numbers of other commenters vigorously contested only one: the manner and timing of cable carriage of the digital advanced television broadcast signal. Before addressing this subject, as well as the subsidiary questions of standards and initial eligibility for ATV channels, these reply comments highlight areas of substantial agreement among all commenters. This agreement should be viewed by the Commission as a clear indication of rules and/or policies it should adopt.

A. THE PUBLIC'S BROADCAST TV SERVICE MUST BE HDTV-CAPABLE.

The comments generally supported HDTV as the centerpiece of an advanced, free, over-the-air broadcast system. Belying the skepticism that some in the cable industry profess about broadcasters' intentions,[2] broadcasters commenting in this proceeding state that they are uniformly committed to giving the public a chance to view HDTV and make up its own mind.[3] Those from the program production[4] and equipment manufacturing industries,[5] who will bear significant responsibilities for rolling out HDTV, also support this venture. So too, consumer representatives are eager to see the public's universal television service evolve and provide entrée to the digital information marketplace.[6]

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[2] See Comments of Cable Telecommunications Association ("CATA"), at 2, 7 (suggesting that broadcasters do not want HDTV). All comments referenced in these replies were filed in the above-captioned docket on November 20, 1995, unless otherwise noted.

[3] See, e.g., Comments of CBS, Inc., at 7-8; Comments of Capital Cities/ABC, Inc., at 7; Comments of Golden Orange Broadcasting, at 2; Comments of National Broadcasting Company, at 7-8; Comments of New World Television, Inc., at 11-15; Joint Comments, at 17-20; Comments of the Association of America's Public Television Stations and the Public Broadcasting Service ("Public Television"), at 18; Comments of the National Association of Broadcasters ("NAB"), at 3-4. This commitment, and the investments that stand behind it, effectively rebut Media Access Project's undocumented and unfounded assertion that "broadcasters want to provide just one 'Standard Definition' Television service on the advanced television spectrum." Comments of Media Access Project ("MAP"), at iii.

[4] See Comments of Home Box Office, at 4-7, 6 ("[T]he Commission's determination that existing broadcasters are the ones most likely to spur the transition from NTSC to much improved HDTV still holds true. Broadcasters by far have the largest audience of television viewers, and the exposure of these . . . viewers to the overwhelming quality enhancements of HDTV will encourage manufacturers to make, and consumers to invest in, HDTV reception equipment.").

[5] See Comments of the Electronic Industries Association and the Advanced Television Committee (the "EIA"), at 4-5; Comments of the Digital HDTV Grand Alliance (the "Grand Alliance"), at 4-5; Comments of the General Instrument Corp. ("GI"), at 5-6; Comments of Thomson Consumer Electronics, Inc. ("Thomson"), at 4; Comments of Zenith Electronics Corp. ("Zenith"), at 2-3.

[6] See, e.g., Comments of the National Consumers League.

There is also widespread appreciation among the commenters that terrestrially broadcast HDTV requires 6 MHz channels and that digital transition channels of anything less would doom HDTV's prospects. It is all well and good to proclaim that the marketplace should decide whether HDTV will succeed or fail; but if broadcasters are not allocated a full 6 MHz for the transition to digital, broadcast HDTV simply will not be a consumer option. Its "marketplace failure" will have been preordained by government fiat.

Moreover, the Grand Alliance system is predicated on 6 MHz channels. Allocation of anything less would send the development of a broadcast transmission standard back to the drawing board, delaying the launch of any broadcast ATV system for years to come, and probably dooming the possibility of a free and universally available ATV medium forever.[7/]

Recognizing that what is contemplated is an upgraded system of free over-the-air television, shouldering the same public interest responsibilities as today's television service and offering enhanced benefits to the public, many commenters expressed views similar to ours that the broadcasters' existing public interest requirements should be satisfied both on the ATV and NTSC channels during the transition and on the ATV channel after the transition is complete. Broadcasters' assumption of public interest obligations on the ATV channel as a whole will make it

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[7/] See Comments of CATA, at 2 (acknowledging that without the transitional ATV spectrum "there will be no HDTV"); Comments of the Grand Alliance, at 2; Comments of GI, at 2; Comments of Zenith, at 3; Comments of EIA, at 19. Notably, even other would-be users of the transitional ATV spectrum do not contest the assignment of ATV channels of 6 Mhz. See Comments of the Personal Communications Industry Association; Comments of Ameritech New Media Enterprises, Inc.; Comments of Motorola; Comments of NYNEX Corp. MAP proposes that the Commission assign channels of less than 6 MHz, but acknowledges that use of such truncated channels could never be for HDTV. See Comments of MAP, at 7-8.

unnecessary for the Commission to apply distinct obligations depending on the particular and varying use of the channel. In any case, it would be inappropriate to attach such obligations to ancillary or supplemental services on the ATV channel (1) where the service offered is non-broadcast and similar services are not subject to the public interest requirements designed for broadcast television[8/] or (2) where the service offered is fee- or subscription-based and therefore obligates payment to the government for use of that portion of the spectrum.[9/]

B. THE TRANSITION TO ATV SHOULD BE SWIFT, THE RECOVERY OF NTSC SPECTRUM CERTAIN, AND THE END-DATE FLEXIBLE.

There is widespread agreement among the commenters that the American public and most of the industries involved will benefit from a transition to ATV that is as swift and smooth as possible. Many commenters recognize the hurdles broadcasters, particularly smaller stations, must overcome in making the transition and that transition costs will be steep.[10/] These challenges support a liberal waiver policy and a staggered transition schedule where special problems arise.[11/] Such an approach would also have

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[8/] Although FCC rules applicable to such non-broadcast services, of course, would apply.

[9/] See, e.g., Joint Comments, at 25; Comments of GI, at 10; Comments of Cohen, Dippel, and Everist, at 4. MAP takes a different view that subscription services offered on the ATV channel be redefined as broadcast services and subjected to public interest obligations. See Comments of MAP, at 26-27. This position does not square with MAP's endorsement of a "compensation theory" of public interest obligations, whereby in lieu of fees "broadcasters must compensate the public with service in exchange for exclusive use of the public airwaves." Id., at 21. Because broadcasters would pay the public in the form of fees for use of the airwaves to offer ancillary subscription services, the theory MAP endorses would require no additional compensation in the form of public interest obligations.

[10/] See Joint Comments, at 12-14; Comments of Christian Communications of Chicagoland, Inc., at 10-11; Comments of Public Television, at 29; Comments of the Grand Alliance, at 14-15.

[11/] See Comments of NAB, at 6-8; Comments of Cohen, Dippel and Everist, P.C., at 4. See also Comments of EIA, at 21 (supporting exceptions to the construction deadlines on a case-

the advantage of dispelling the cable industry's fear that operators will be required to pass digital broadcast signals through analog or low-capacity cable systems (see Section II below), because it would increase the likelihood that smaller broadcasters and cable operators (or those in smaller markets) will develop enhanced capabilities at the same pace.

The ultimate fate of the present NTSC spectrum is not in doubt. All commenters agree that it is most efficient for contiguous blocks of spectrum to be returned to the Commission for reassignment upon completion of the transition to ATV.[12/] The certainty of this outcome should allow the Commission to withstand ill-advised suggestions that it fix a transition date or peg that date to arbitrary benchmarks. For example, Motorola's suggestion that the FCC set a date certain for NTSC cessation on each ATV construction permit[13/] ignores the inherent unpredictability at this point of the rate of public acceptance of ATV.[14/] Other proposals to set a transition completion

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by-case basis).

[12/] See, e.g., Joint Comments, at 29; Comments of Ameritech New Media Enterprises, Inc., at 5; Comments of Motorola, at 6; Comments of the Association of Public-Safety Communications Officials-International, Inc., at 2; Comments of EIA, at 25-26.

[13/] See Comments of Motorola, at 6.

[14/] See, e.g., Comments of Busse Broadcasting Corp., at 5; Comments of NAB, at 2-4; Comments of CATA, at 2. In a recent speech on ATV, FCC Chairman Reed Hundt questioned whether "consumers will purchase tens of millions of digital TVs that each cost between 15% and 50% more than analog TVs[.] Maybe instead consumers will regard the necessity of upgrading to digital reception as a multibillion dollar tax." Reed Hundt, Remarks of Chairman Reed Hundt Before the International Radio and Television Society, New York, New York (November 21, 1995). The likelihood that the public will experience the transition as an opportunity rather than a burden is increased by public involvement in setting the pace of the transition, aided by the incentives of program offerings on the ATV channel. Setting a date for the moratorium on NTSC now absent any market data, as Motorola proposes, would constitute just the sort of anti-consumer government action that the Chairman criticizes.

date or penetration-based benchmarks to trigger the end of the transition are similarly premature.[15/]

If the Commission adopts the approach we advocate -- instituting incentives for the transition, such as exercising its authority under the All Channel Receiver Act to ensure that all sets sold after a date certain can receive all digital formats and decode and render then in a recognizable display -- broadcasters and the public will be assured that an expeditious transition will take place.[16/]

Instead of a (Motorola-like) proposal that would disenfranchise large numbers of viewers, the Commission should adopt measures to discourage consumer investment in outmoded technology that would delay the transition. The certain end of NTSC-only set production will address the temptations uncertainty otherwise could create -- for the consumer to delay the adoption of new technology, and for some broadcasters to delay conversion and gamble that NTSC will persist. Of course, once a broadcaster installs a new transmitter, antenna, transmission line, and in-plant facilities, and broadcasts programs with audience appeal in the digital format, there also will be a

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[15/] See Comments of New World Television, Inc., at 8 (proposing that the transition be deemed complete in 7-15 years); Comments of Pacific FM, Inc., at 4 (proposing that the transition be deemed complete when a "clear preponderance" of households receive ATV transmissions); Comments of the Grand Alliance, at 13 (proposing that the transition be deemed complete when 80% of the households in "broadcast reception areas" no longer rely exclusively on NTSC broadcasting); Comments of GI, at 13 (same).

[16/] The All Channel Receiver Act of 1962, Pub. L. No. 87-529, 47 U.S.C. § 303(s), authorizes the FCC to require that receivers "adequately receiv[e] all frequencies allocated by the Commission to television broadcasting . . .." See Joint Comments, at 37.

powerful financial incentive to move from two-channel to single-channel operation as quickly as possible.[17/]

C. RECEIVERS DESIGNED FOR THE NEW ATV MARKET SHOULD ACCOMMODATE ALL FORMATS OF THE BROADCAST DIGITAL SIGNAL.

Most of the commenters agreed that the extent to which receivers are capable of receiving all modes of ATV transmission will affect the success and pace of the transition. Sharing that view, one equipment manufacturer commented that "the All-Channel Receiver Act provides the framework under which ATV receivers could be required to decode and display all television signals."[18/] Most of the other equipment manufacturers commented that they would not object to such a requirement.[19/] Without such an all-mode decoding capability and the capability to render the digital signal in a recognizable display, receivers will go black when confronted with the broadcast of HDTV or any other member of the digital transmission hierarchy the receiver cannot accommodate. This is of special concern to terrestrial broadcasters. Unlike cable and DBS systems that can easily install set-top boxes or cards, broadcasters rely on the built-in features of integrated receivers and would be unable to reach their audience if digital receivers with selective decoding capabilities proliferated. Similarly, proper interference standards will be critical to ensure the public's reception of satisfactory signals.

[17/] See Joint Comments, at 26-28; Comments of Pulitzer Broadcasting Co., at 3 ("Pulitzer and other television licensees will be highly motivated to shorten the period during which they will have to pay for the additional costs of operating two transmission facilities.").

[18/] Comments of Hitachi America, Ltd., at 3. Hitachi urges that the FCC abstain from regulating display formats.

[19/] See Comments of the Grand Alliance, at 17 (acceding to a requirement that sets be required to receive all ATV formats); Comments of Texas Instruments, at 5 (same); Comments of Thomson, at 9 (same); Comments of Zenith, at 4 (same); but see Comments of GI, at 18 (opposing regulation); Comments of EIA, at 13-15 (same).

II. CABLE CARRIAGE ISSUES

The goal of this proceeding is to make free over-the-air broadcast service, with the highest quality picture and sound, available to the American public as quickly as possible. Because more than two-thirds of households receive broadcast programming via cable, broadcasters poised to implement the transition to ATV need assurance that ATV programming will reach cable subscribers among their viewers. By the same token, consumers need assurance that if they buy ATV sets, they will be able to receive the full range of ATV programming, including broadcasting. If consumers purchase high-end sets, they need assurance that they will receive high-resolution HDTV. Consumers that are unable to buy ATV initially need assurance that they will not be deprived of NTSC programming.

For these reasons, all broadcasters and members of other industries support the maintenance of an obligation that cable systems carry both NTSC and ATV broadcasts throughout the transition to ATV.[20/] Requiring such carriage is a logical application of the existing must carry rules, which, having been upheld over and over by the courts, the Commission is bound to accept as lawful. Moreover, the reasons for requiring carriage of ATV broadcast signals are even stronger than those for carrying NTSC signals alone, because cable carriage will determine the success of ATV, as well as the long-term survival of free broadcast television.

[20/] See Joint Comments, at 31-35; Comments of New World Television, Inc., at 16; Comments of Christian Communications, at 12; Comments of Public Television, at 30-34; Comments of EIA, at 9-10; Comments of MAP, at 35-36. See also Comments of Golden Orange Broadcasting Co., Inc., at 4 (urging that a given cable system and local broadcasters agree to a date by which the cable system will carry the ATV signal).

Some cable industry commenters object to carrying some or all ATV broadcast programming.[21/] They view the "primary video" that the Communications Act requires cable systems to carry as something less than the full complement of free, over-the-air video programming local stations intend their audiences to view.[22/] Such a definition runs counter to the policies underlying the must carry provisions of the Cable Act[23/] and this proceeding. Instead, the obligation to carry "primary video" must entail that cable subscribers can receive, over easily identifiable channels, all the free broadcast programming their local stations intend the general public to receive.

[21/] See Comments of CATA, at 4-7; Comments of InterMedia, at 4-5; Comments of National Cable Television Association ("NCTA"), at 2-16; Comments of Tele-Communications, Inc. ("TCI"), at 5-19; and Comments of Turner Broadcasting System ("Turner"), at 2-6.

Some of the equipment manufacturers commenting in this proceeding nominally oppose attaching must carry obligations to the entire ATV channel, while at the same time arguing for HDTV minimums that will not be effective in driving the transition unless cable carriage is mandated. See, e.g., Comments of the Grand Alliance, at 4 (urging HDTV minimums and flexible use); Comments of GI, at 6, 19-20 (advocating HDTV minimums, flexible use, and mandatory carriage for some ATV programming); Comments of Thomson, at 4 (urging HDTV minimums and flexible use), Comments of Zenith, at 3, 5 (advocating HDTV minimums and promotion of "the rapid availability of digital HDTV broadcasts over cable television systems"). Carriage of multi-SDTV broadcasts at some times during the broadcast schedule would impose no additional burden on a cable system that carries HDTV, so long as the cable system carries the entire 6 MHz of broadcast signal. The supposed "chaos" TCI foresees for the cable operator if it were required to carry multiple SDTV programs (Comments of TCI, at 18-19) would not occur if the cable system set aside a single 6 MHz block of bandwidth for the carriage of a broadcast licensee's NTSC and ATV programming, as is practical for all digital systems. We recognize below that a cable system that has unusually limited capacity would face special problems, for which exceptions would have to be crafted.

[22/] Section 614(b)(3)(A) of the Communications Act requires carriage of "the primary video, accompanying audio and line 21 closed caption transmission" of commercial stations. 47 U.S.C. § 534(b)(3)(A). Section 615(g)(1) imposes the same requirement with respect to non-commercial stations. See 47 U.S.C. § 535(g)(1).

[23/] Cable Television Consumer Protection and Competition Act of 1992, Pub. L. 102-385, 106 Stat. 1460 (1992), codified at 47 U.S.C. § 521 et seq.

A. THE CABLE ACT, EXISTING MUST CARRY RULES AND THE GOALS OF THIS PROCEEDING SUPPORT REQUIRING CABLE SYSTEMS TO CARRY ALL ATV BROADCAST MATERIAL INTENDED FOR RECEPTION BY THE GENERAL PUBLIC AND TRANSMITTED FREE OF CHARGE.

The Commission itself has best described the Cable Act's goals:

> The 1992 Act and its legislative history evidence Congress' conclusion that there is a substantial governmental interest in ensuring that cable subscribers have access to local commercial and noncommercial broadcast stations. Further, the 1992 Act and its legislative history indicate that Congress has determined that the must carry and channel positioning provisions of the 1992 Act are needed to protect the system of free, over-the-air television broadcasting and to promote competition in local markets. Specifically, Congress has concluded that such regulation is needed to ensure a competitive balance between cable systems and broadcast stations.[24/]

These goals are implemented by the must carry provisions of the 1992 Cable Act, which are designed to protect and foster the nation's system of free, over-the-air broadcasting.[25/] To ensure that broadcast television would remain universally available and competitive through the transition to a digital environment, Congress also required the Commission to adjust its signal carriage rules when it adopts ATV standards.[26/] The public policy goals achieved through the must carry provisions of the

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[24/] See In re Implementation of the Cable Television Consumer Protection and Competition Act of 1992, 7 FCC Rcd. 8085 (1993).

[25/] In Turner Broadcasting System, Inc. v. FCC, 114 S. Ct. 2445, 2469 (1994), a majority of the Supreme Court acknowledged that preservation of the benefits of free, over-the-air local broadcasting is an important government interest, and, reiterating the statement the Court made over 25 years ago, said:

> The importance of local broadcasting outlets 'can scarcely be exaggerated, for broadcasting is demonstrably a principal source of information and entertainment for a great part of the Nation's population.' (citing United States v. Southwestern Cable Co., 392 U.S. 157, 177 (1968)).

[26/] "[A]t such time as the Commission prescribes modifications of the standards for television broadcast signals, the Commission shall initiate a proceeding to establish any changes in the signal carriage requirements of cable television systems necessary to ensure cable carriage

Cable Act would be undermined, and the substantial government interest in the continued universal availability and economic viability of local broadcasting thwarted, if cable's signal carriage obligations were not applied to local stations' NTSC and ATV transitional channels. If ATV broadcasts are not carried, local stations will not be able to compete with the technically superior pictures and sound that soon will be available on competing cable channels. Unlike subscription services, advertiser-supported broadcast television depends on mass reach. To survive, much less compete, in a multichannel environment, local stations must be able to reach the 66% of U.S. households that receive broadcast signals via cable, and reach them in a way that preserves a station's identity.

Although the capacity of many cable systems will increase dramatically with the deployment of fiber in the distribution network and with digital compression technology, competitive interests still may motivate them to exclude ATV broadcast signals, and to carry only the technically inferior NTSC service. The same motivations may cause cable operators to carry ATV broadcast programming only selectively, or to bury ATV broadcast channels in undesirable locations on the program menu.[27/] In short, if must carry requirements are not applied to broadcasters' ATV channels during

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of such broadcast signals of local commercial television stations which have been changed to conform with such modified standards." 47 U.S.C. § 534(b)(4)(B). All references to Section 614 are to that section of the Communications Act of 1934, as amended by the Cable Act, Section 4. Cf. Joint Comments, at 32; Fourth NPRM, at 31.

[27/] The threat of such behavior underlies the must carry rules. Congress found that:

> A cable television system which carries the signal of a local television broadcaster is assisting the broadcaster to increase its viewership, and thereby attract additional advertising revenues that otherwise might be earned by the cable system operator. As a result, there is an economic incentive for cable systems to terminate the retransmission of the broadcast signals, refuse to carry new signals, or reposition a broadcast signal to a disadvantageous channel position.

H.R. Rep. No. 862, 102d Cong., 2nd Sess. 3 (1992).

the transition, the ability of the free over-the-air television system to compete will suffer. This is not what Congress sought when it provided for adjustment of must carry requirements to accommodate digital broadcasting. The rationale for ensuring broadcast television's ability to compete with multi-channel delivery systems through mandatory carriage in a traditional NTSC environment is even stronger in a fragile transitional environment where both the existing service and the new service will be under more extreme competitive pressures and the public's stake in receiving its broadcast signals is even greater. Cable systems accordingly should be required to carry the digital signals that local television stations broadcast free, over-the-air, for reception by the entire public, just as those systems are required to do now with respect to NTSC broadcast channels.

Many cable commenters concede that Congress intended Section 614(b)(4)(B) to require the application of the must carry rules in an ATV environment to ensure that the entire public continues to have access to the highest quality broadcast offerings.[28/] But during the transition period, TCI says must carry obligations should apply only to the broadcaster's NTSC signal.[29/] TCI's reading of the Cable Act denudes Section 614(b)(4)(B) of any meaning during the transition, because carriage of the NTSC signal would not require any modification of the must carry rules or their application. It is also inconsistent with the Congressional instruction that the Commission establish "changes" in signal carriage requirements "at such time as the

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[28/] See Comments of NCTA, at 7 ("...once a single-channel broadcast station changed to a new ATV technical standard, the must carry rules would need to be modified to maintain retransmission of a high quality signal by cable."). See also, Comments of TCI, at 8.

[29/] Comments of TCI, at 5.

Commission prescribes modification of the standards for television broadcast signals." Because the Commission must establish the ATV transmission standard before the transition period can begin, the language of the section contemplates associated must carry adjustments to govern the transition.

A further problem with TCI's interpretation of Section 614(b)(4)(B) is that it assumes that the Cable Act intended to freeze the programming stream to which the public has guaranteed access at 1992 levels and provide for the carriage of this stream only in an improved format.[30/] In effect, TCI's reading would make application of the must carry rules contingent upon the adoption of an ATV standard that allows only a single program stream and, further, only a program stream of simulcast NTSC programming.[31/] Such hostility to technological advances is inconsistent with and was not intended by the Cable Act. The Cable Act itself attaches no such restriction to must carry requirements, even though the possibility of multiple ATV programming streams was envisioned at the time of enactment.[32/] On the contrary, Section 614(b)(4)(B) requires the FCC to adapt the must carry rules to accommodate free, over-the-air, local broadcast signals that conform to the digital ATV standard -- whatever that standard is,

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[30/] If read in conjunction with TCI's definition of "primary video," guaranteed access to this improved format would begin only after the transition to ATV was complete.

[31/] One cable commenter seems to suggest that the definition of primary video should be delegated to the individual broadcasters, who would choose between their NTSC and ATV signals as to which also is to be designated "prime video." See Comments of NCTA, at 16.

[32/] See Memorandum Opinion and Order/Third Report and Order/Third Further Notice of Proposed Rule Making, MM Docket No. 87-268, 7 FCC Rcd. 6924, 6967 (1992) ("We . . . intend to consider authorization of other advanced video applications, including future techniques that might provide for transmission of more than one ATV program service on a single conversion channel, so long as they are compatible with the ATV system we select. Such a development would be of potentially great significance to broadcasters' ability to compete in a multichannel environment.").

whatever the diversity of programming options it permits and as soon as it is adopted. Today's understanding of "primary video" as that free, over-the-air video stream that broadcasters intend to deliver to the general public is consistent with this reading of Section 614(b)(4)(B) and should persist.[33/]

In addition to the Cable Act's policies, the Commission's stated goals in this proceeding support our reading of Section 614(b)(4)(B), our definition of "primary video" and the ensuing application of the must carry rules to broadcast services provided on the ATV channel. These goals are to: (1) preserve free, universal broadcasting service; (2) foster an expeditious and orderly transition to digital technology; and (3) ensure that the spectrum will be used in a manner that best serves the public interest. Fourth NPRM, at 4.[34/]

Put succinctly, the public should receive an advanced digital, flexible, free television service as quickly and smoothly as possible. The evolution that broadcasters are facilitating, and that the Commission is urging, will have little impact unless its results can pass through the cable gateway. Certainly, access to viewers is critical to the orderliness and speed of transition that the Commission seeks to foster through a carefully crafted allotment/assignment table and expeditious ATV implementation. Broadcasters must be confident that the new broadcast services they invest in and

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[33/] See Comments of EIA, at n.14 (supporting this reading with the argument that "'primary video' stands in contrast to 'nonprogram-related material' and certain material in the vertical blanking interval." See 47 U.S.C. § 534(3)(A)).

[34/] The fourth goal is to manage the spectrum to permit the recovery of contiguous blocks of spectrum.

transmit will be able to reach their audience or pursuit of their traditional public service objectives will fail.[35/]

B. CARRIAGE OF ATV BROADCAST MATERIAL WILL NOT UNDULY BURDEN CABLE SYSTEMS.

Fortunately, because much of the cable industry has scheduled its progress toward digital transmission capabilities at about the same pace as the broadcast industry, the definition of "primary video" as the free, over-the-air video stream that broadcasters intend their viewers to see will not overly burden cable systems. In protesting any ATV carriage requirement, one cable commenter complained that such a rule would require cable operators to double the number of channels available for local broadcasters.[36/] This complaint, like many of the others,[37/] assumes that as a given broadcaster goes digital, cable systems will remain analog and that carriage of ATV signals will use capacity faster than the cable systems are adding it. This probably will not be the case and cable will have ample capacity to accommodate broadcast signals without undue burden.[38/]

As for the capacity of digital cable systems, as we noted in our initial comments, one 6 MHz cable channel could carry the equivalent of at least 8 NTSC/SDTV or 2 HDTV services or a compressed NTSC channel and four multicast

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[35/] See Joint Comments, at 31-39; Comments of Public Television, at 31-32.

[36/] See Comments of CATA, at 5.

[37/] See, e.g., Comments of NCTA, at 13; Comments of TCI, at 19.

[38/] History demonstrates that cable's claims of capacity shortfall and the impact of must carry on cable systems and cable networks has been greatly exaggerated. Indeed, the U.S. District Court for the District of Columbia found: (1) cable capacity is rapidly increasing; (2) only 1.2% of cable channel capacity is occupied by broadcast must carry stations; and (3) the burden on cable programmers and cable systems has been small. Turner Broadcasting v. Federal Communications Commission, No. 92-2247, slip op at 18-22 (December 12, 1995).

SDTV channels.[39] Thus, the advent of ATV will not increase cable systems' relative carriage obligations.[40] Cable commenters raise a concern with respect to systems that delay in upgrading. The Communications Act already strikes a reasonable balance between capacity and demand by requiring carriage of local broadcast signals on up to one-third of a qualified cable system's useable activated channels. See 47 U.S.C. § 534(b)(1)(B). Moreover, small cable systems are generally exempt from this requirement. See 47 U.S.C. § 534 (b)(1)(A). As a general matter, this existing balance suits the transitional environment in which cable systems are vastly increasing their analog capacity and gaining even greater channel capacity by converting to digital.

With respect to timing issues, we share the expectation of the Commission "that there will be parallel development of both cable and broadcast digital video communications." Fourth NPRM, at 32. It is likely that systems that are slower to increase their capacity will often be in the same markets as broadcast stations that are slower to convert. Thus carriage demands will correspond to the supply of capacity. However, if this synchrony fails, exceptions may be appropriate in limited circumstances for technologically limited small analog cable systems.[41] For that reason,

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[39] See Joint Comments, at 33. See also Comments of GI, at 19 (a cable system is likely to recombine multiple SDTV programs "with other program streams into a higher data rate signal; a higher data rate is feasible on a cable channel because it is a friendlier propagation environment than over-the-air broadcasting. Two broadcast HDTV programs might be multiplexed together in a single 6 MHz cable channel, or an HDTV program and several SDTV programs might be multiplexed together.").

[40] Because, as a practical matter, ATV would not expand cable's existing must carry burdens, NCTA, in its Comments at 10, is mistaken in suggesting that the FCC must build a new factual record to support the government's interest in applying must-carry during the transition. The existing must carry rules and the already established factual predicate are sufficient authority for mandatory carriage of the ATV broadcast material.

[41] See Comments of TCI, at 17.

Broadcasters' comments acknowledged that the Commission may find it necessary to phase in application of must carry requirements for small cable systems that have delayed upgrading to digital or have not expanded their analog capacity.[42/] Any such procedure or granting of exceptions should include a review mechanism to ensure that cable systems are not delaying technical upgrades for anti-competitive purposes.

Cable interests commenting in this proceeding argue that, in addition to excusing them from must carry obligations in the ATV transitional world, the Commission should impose additional costs on broadcasters for mandatory cable carriage of broadcast signals. Broadcasters currently bear the costs of delivering a good quality signal to the cable system's principal headend. TCI would have broadcasters also pay for cable systems to upgrade to digital and to otherwise make their systems friendly to the ATV signal.[43/] TCI correctly points out that cable systems were not required to retrofit equipment already installed at the time the cable programming and access requirements were implemented. The ATV situation is entirely different; the cable industry knows what technical compatibility issues lie ahead before it installs equipment or adopts unfriendly standards. No retrofitting will be necessary unless cable systems

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[42/] See Joint Comments, at 34. In this context, Golden Orange Broadcasting Co., Inc., at 4, has proposed that cable systems that have not yet converted to digital at the headend should carry either a converted ATV signal or the NTSC signal, but that the system should carry the full unconverted ATV channel when it installs equipment capable of doing so. Broadcasters believe that all cable systems should continue to carry the NTSC programming as well as ATV programming. In addition, the FCC should presume that all cable systems are capable of fulfilling a requirement to carry the ATV broadcast programming, unless they prove otherwise. We expressly reject any procedure in which a cable operator deemed incapable of carrying the ATV broadcast programming would be permitted to elect a date for such carriage. Instead, the FCC should impose a schedule based on the projected development of the necessary carriage capabilities.

[43/] See Comments of TCI, at 15-17, 31.

make it so. Any expenses thus incurred to ensure compatibility with the public's ATV broadcast signals therefore should be borne by those systems.

C. CABLE SYSTEMS SHOULD ENSURE THAT THEIR TECHNICAL STANDARDS AND PRACTICES DO NOT INTERFERE WITH THE PUBLIC'S ACCESS TO BROADCAST SIGNALS AND A SPEEDY TRANSITION TO ATV.

The Fourth NPRM recognizes that cable carriage of ATV signals would raise "issues relate[d] to the technical interface and associated cost and rate issues." Fourth NPRM, at 32. Among other things, the Joint Comments urged that "the Commission should safeguard against the anti-competitive use of set-top boxes to create technological barriers that could deny the viewing public access to ATV programming. . .. [Furthermore,] the technical standard the cable industry, or any part of that industry, selects should not be permitted to interfere with cable systems' fulfillment of their must carry and other obligations."[44/] The decade-long development and testing of the ATV standard under the auspices of the FCC Advisory Committee on Advanced Television Service ("ACATS") supports this view. Throughout that history, broadcast/cable compatibility has been a central focus. As the NAB comments point out, the Commission itself consistently has noted the importance of compatibility between the transmission of broadcast and cable signals.[45/] To meet that concern, the ACATS ATV

[44/] Joint Comments, at 38-39.

[45/] See Comments of NAB, at 8-9 (citing Tentative Decision and Further Notice of Inquiry, MM Docket No. 87-268, 3 FCC Rcd. 6520 (1988) (supporting interoperability); Second Report and Order and Further Notice of Proposed Rule Making, MM Docket No. 87-268, 7 FCC Rcd. 3340 (1992) (proposing that ATV system must support carriage of ATV over cable systems); Memorandum Opinion and Order/Third report and Order/Third Further Notice of Proposed Rule Making, MM Docket No. 87-268, 7 FCC Rcd. 6924 (1992) (endorsing efforts to ensure that ATV standard performs satisfactorily for both broadcast and cable operations); First Report and Order, ET Docket No. 93-7, 9 FCC Rcd. 1981 (1994) (noting that the development of a digital cable standard must consider the relationship of the cable system to the terrestrial broadcast ATV standard)).

standard includes a high capacity special transmission mode suitable for the cable environment. Cable interests, represented by CableLabs, have been represented and have monitored and contributed to the development of this standard through the Advanced Television Test Center and ACATS process. This joint effort by the cable and broadcast industries was intended to lead to cable's adoption of the ATV standard to ensure maximum compatibility between both industries.

A number of cable commenters now urge that the Commission not require cable to adopt technologies that are compatible with the ACATS ATV standard.[46/] Incompatible broadcast and cable ATV technologies will cause consumer confusion in the marketplace, raise the costs of receiving ATV, slow the penetration of cable-ready ATV sets, delay the transition to an all-digital broadcast service, and frustrate the Commission's goal of returning NTSC spectrum. Specifically, if cable systems develop non-standard and various digital compression, packetization and transmission schemes, digital ATV sets designed to accommodate the broadcast standard will not be able to decode cable's digital information unless fitted with cable decoders. Thus, cable-ready sets would be prohibitively expensive and unlikely to penetrate the market very quickly, if they were available at all. Consumers would have small incentive to purchase ATV sets only capable of receiving broadcast signals and incapable of receiving cable signals.

In place of cable-ready sets, cable equipment manufacturers would have to produce a large quantity of set-top box converters. The mandatory set-top box would convert all cable-delivered programs to analog format for viewing on analog sets or for

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[46/] NCTA requests that the Commission not impose the broadcast digital standard on cable. See Comments of NCTA, at 17. TCI and GI oppose the application of any standard to cable. See Comments of TCI, at 21; Comments of GI, at 18.